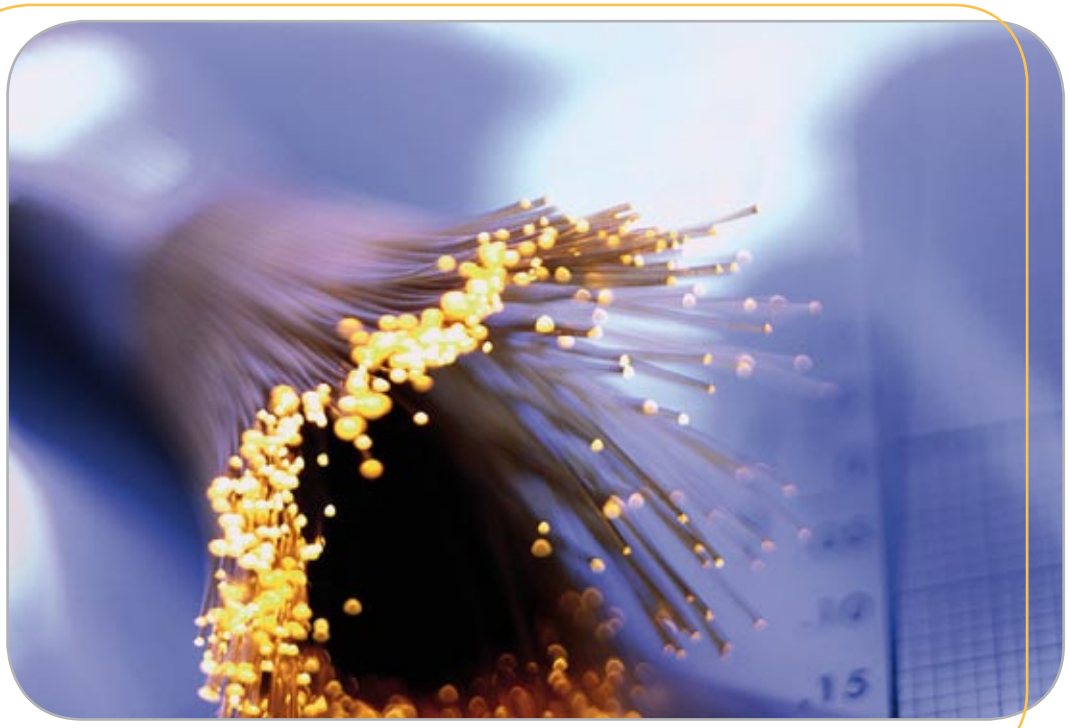
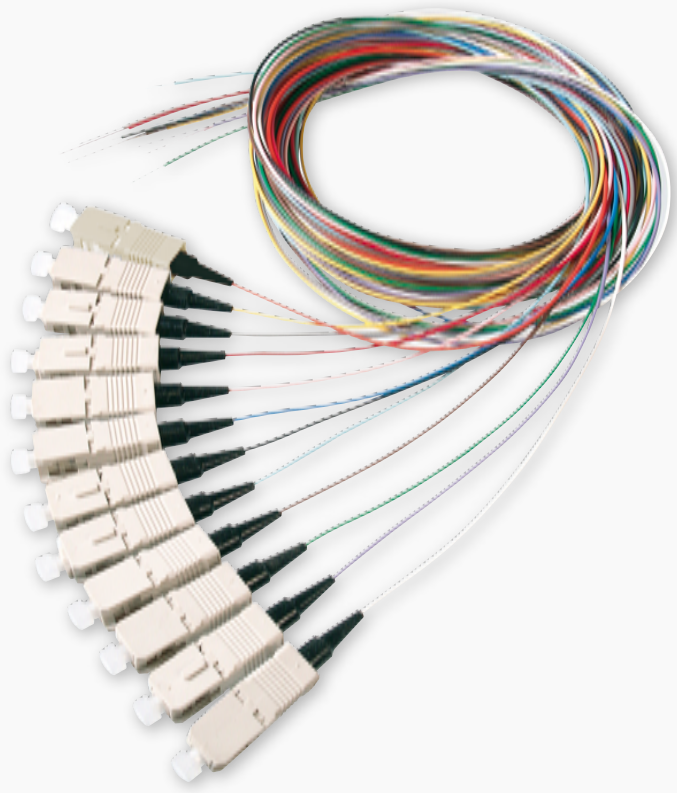




FIBER OPTIC

Multimode Duplex OM1 62.5/125µ 57
Multimode Duplex OM2 50/125µ. 58
Multimode Duplex OM3 50/125µ. 58
SingleMode Duplex 9/125µ. 59
SingleMode Duplex E2000 59
Simplex pigtails 60
Connectors/coupling 61
Fiber Optic Cable System ,breakout cable . . . 62
Splice box 63-64
19" Prefabriquated fiber optic box. 64

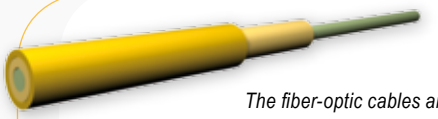
FIBER OPTIC

FIBER OPTIC COMMUNICATION

Optical fiber can be used as a medium for telecommunication and networking because it is flexible and can be bundled as cables. It is especially advantageous for long-distance communications, because light propagates through the fiber with little attenuation compared to electrical cables. This allows long distances to be spanned with few repeaters.

Understanding the characteristics of different fiber types aides in understanding the applications for which they are used. Operating a fiber optic system properly relies on knowing what type of fiber is being used and why.

There are two basic types of fiber: multimode fiber and singlemode fiber. MULTIMODE FIBER is best designed for short transmission distances, and is suited for use in LAN systems and video surveillance. SINGLEMODE FIBER is best designed for longer transmission distances, making it suitable for long-distance telephony and multichannel television broadcast systems.



The fiber-optic cables are made with pure glass. Pure glass is flexible, strong and no corrosive.

MONO OR MULTIMODE

The used connectors only serve for assuring the connection of a optical fiber with another coupler or converter. They don't interfere on the nature of the signal but supply, provide according to the model, a connection without decrease.

WHAT WE SHOULD REMEMBER:

- **When and why use the optical fibre?**
  As soon as the connection is longer as 100 m, the use is advised.
- **Why a pair of fiber ?** The liaison is carried out simultaneously in 2 directions , one of them sends and the other fiber receives.
- **The sending signal must always be the same as the receiving signal.**
  The active equipments can come from different constructors.

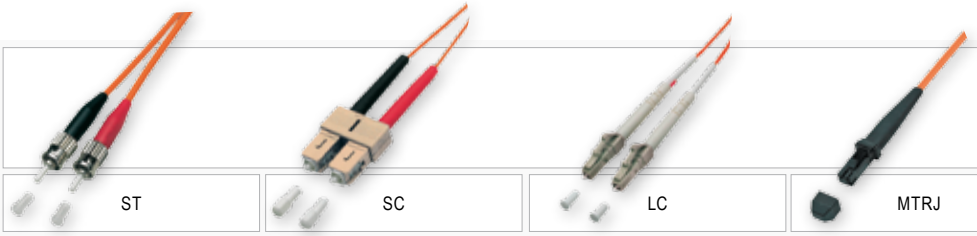
  What matters is the respect for the type of signal.
  - 10FL to 10 FL
  - 100FX to 100FX
  - 1000SX to 1000SX

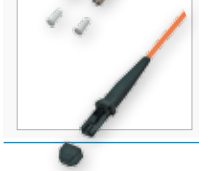
  It is impossible to have a connection between a 100fx converter and a 1000sx.
- **An optical fiber can have different connectors in the 2 extremities.**
  The active components can have a different connection but can work on the same signal.
  This is enough to link them with a mixed fiber. For example: SC on a side and LC of the other one.
- **The used material for optic fiber is Fiberglass . It is important to respect a beam (shelf) of curvature to not break the fiber.**

MULTIMODE DUPLEX 62.5/125µ

Connector with ceramic ferrule
Halogenfree cable
Multimode OM1 - 62.5/125µ
up to 1 Gbit ethernet

LSoH

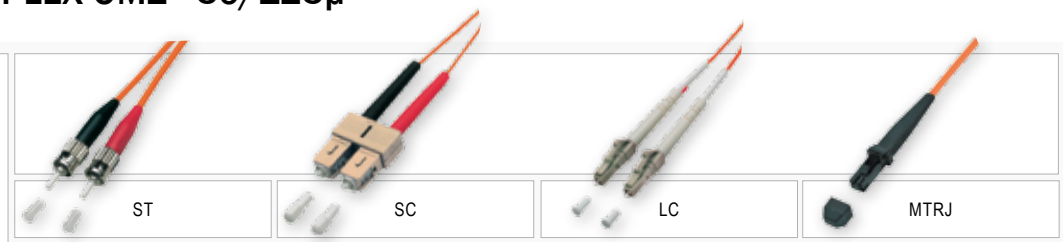


			ST		SC		LC		MTRJ	
			reference		reference		reference		reference	
	ST	1 m	AL6STST01I		AL6STSC01		AL6LCST01I			
		2 m	AL6STST02I		AL6STSC02I		AL6LCST02I			
		3 m	AL6STST03I		AL6STSC03I		AL6LCST03I			
		5 m	AL6STST05I		AL6STSC05I		AL6LCST05I			
		10 m	AL6STST10I		AL6STSC10I		AL6LCST10I			
	SC	1 m	AL6STSC01I		AL6SCSC01I		AL6LCSC01I		AL6MTRJSC01I	
		2 m	AL6STSC02I		AL6SCSC02I		AL6LCSC02I		AL6MTRJSC02I	
		3 m	AL6STSC03I		AL6SCSC03I		AL6LCSC03I		AL6MTRJSC03I	
		5 m	AL6STSC05I		AL6SCSC05I		AL6LCSC05I		AL6MTRJSC05I	
		10 m	AL6STSC10I		AL6SCSC10I		AL6LCSC10I		AL6MTRJSC10I	
	LC	1 m	AL6LCST01I		AL6LCSC01I		AL6LCLC01I			
		2 m	AL6LCST02I		AL6LCSC02I		AL6LCLC02I			
		3 m	AL6LCST03I		AL6LCSC03I		AL6LCLC03I			
		5 m	AL6LCST05I		AL6LCSC05I		AL6LCLC05I			
		10 m	AL6LCST10I		AL6LCSC10I		AL6LCLC10I			
	MTRJ	1 m			AL6MTRJSC01I				AL6MTRJMTRJ01I	
		2 m			AL6MTRJSC02I				AL6MTRJMTRJ02I	
		3 m			AL6MTRJSC03I				AL6MTRJMTRJ03I	

MULTIMODE DUPLEX OM2 - 50/125µ

Connector with ceramic ferrule
Halogenfree cable
Multimode OM2 - 50/125µ
up to 1 Gbit ethernet

LSOH

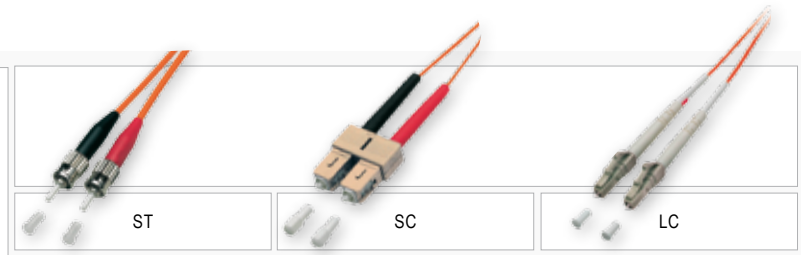


	length	ST reference	SC reference	LC reference	MTRJ reference
ST	1 m	AL5STST01I	AL5STSC01I	AL5LCST01I	AL5MTRJST01I
	2 m	AL5STST02I	AL5STSC02I	AL5LCST02I	AL5MTRJST02I
	3 m	AL5STST03I	AL5STSC03I	AL5LCST03I	AL5MTRJST03I
	5 m	AL5STST05I	AL5STSC05I	AL5LCST05I	AL5MTRJST05I
	10 m	AL5STST10I	AL5STSC10I	AL5LCST10I	AL5MTRJST10I
SC	1 m	AL5STSC01I	AL5SCSC01I	AL5LCSC01I	AL5MTRJSC01I
	2 m	AL5STSC02I	AL5SCSC02I	AL5LCSC02I	AL5MTRJSC02I
	3 m	AL5STSC03I	AL5SCSC03I	AL5LCSC03I	AL5MTRJSC03I
	5 m	AL5STSC05I	AL5SCSC05I	AL5LCSC05I	AL5MTRJSC05I
	10 m	AL5STSC10I	AL5SCSC10I	AL5LCSC10I	AL5MTRJSC10I
LC	1 m	AL5LCST01I	AL5LCSC01I	AL5LCLC01I	AL5MTRJLC01I
	2 m	AL5LCST02I	AL5LCSC02I		AL5MTRJLC02I
	3 m	AL5LCST03I	AL5LCSC03I	AL5LCLC02I	AL5MTRJLC03I
	5 m	AL5LCST05I	AL5LCSC05I	AL5LCLC03I	AL5MTRJLC05I
	10 m	AL5LCST10I	AL5LCSC10I	AL5LCLC05I	AL5MTRJLC10I
				AL5LCLC10I	
MTRJ	1 m	AL5MTRJST01I	AL5MTRJSC01I	AL5MTRJLC01I	AL5MTRJMTRJ01I
	2 m	AL5MTRJST02I	AL5MTRJSC02I	AL5MTRJLC02I	AL5MTRJMTRJ02I
	3 m	AL5MTRJST03I	AL5MTRJSC03I	AL5MTRJLC03I	AL5MTRJMTRJ03I

MULTIMODE DUPLEX OM3 - 50/125µ

Connector with ceramic ferrule
Halogenfree cable
Multimode OM3 - 50/125µ
up to 10 Gbit ethernet

LSOH



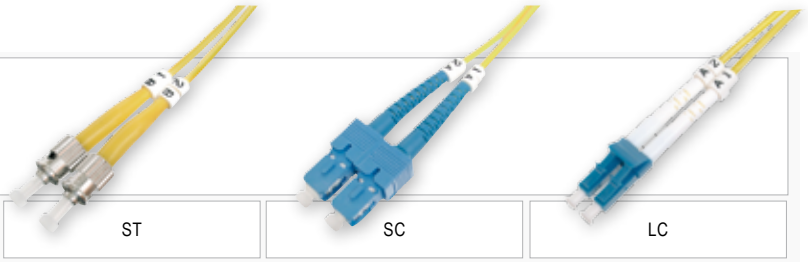
OM3
UP TO 10 GBPS !

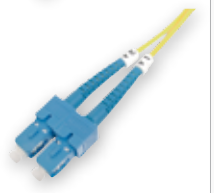
	length	ST reference	SC reference	LC reference
ST	1 m	AL5STST01/3I	AL5STSC01/3I	AL5LCST01/3I
	2 m	AL5STST02/3I	AL5STSC02/3I	AL5LCST02/3I
	3 m	AL5STST03/3I	AL5STSC03/3I	AL5LCST03/3I
	5 m	AL5STST05/3I	AL5STSC05/3I	AL5LCST05/3I
	10 m	AL5STST10/3I	AL5STSC10/3I	AL5LCST10/3I
SC	1 m	AL5STSC01/3I	AL5SCSC01/3I	AL5LCSC01/3I
	2 m	AL5STSC02/3I	AL5SCSC02/3I	AL5LCSC02/3I
	3 m	AL5STSC03/3I	AL5SCSC03/3I	AL5LCSC03/3I
	5 m	AL5STSC05/3I	AL5SCSC05/3I	AL5LCSC05/3I
	10 m	AL5STSC10/3I	AL5SCSC10/3I	AL5LCSC10/3I
LC	1 m	AL5LCST01/3I	AL5LCSC01/3I	AL5LCLC01/3I
	2 m	AL5LCST02/3I	AL5LCSC02/3I	AL5LCLC02/3I
	3 m	AL5LCST03/3I	AL5LCSC03/3I	AL5LCLC03/3I
	5 m	AL5LCST05/3I	AL5LCSC05/3I	AL5LCLC05/3I
	10 m	AL5LCST10/3I	AL5LCSC10/3I	AL5LCLC10/3I

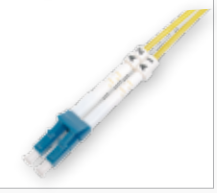
SINGLEMODE DUPLEX 9/125µ

Connector with ceramic ferrule
Singlemode 09/125 µ, Duplex
Single packed, with test report

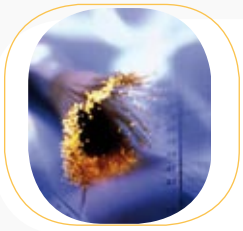
LSOH







	length	ST reference		SC reference		LC reference	
ST	1 m	AL9STST01I		AL9STSC01I		AL9LCST01I	
	2 m	AL9STST02I		AL9STSC02I		AL9LCST02I	
	3 m	AL9STST03I		AL9STSC03I		AL9LCST03I	
	5 m	AL9STST05I		AL9STSC05I		AL9LCST05I	
	7 m	AL9STST07I		AL9STSC07I		AL9LCST07I	
	10 m	AL9STST10I		AL9STSC10I		AL9LCST10I	
SC	1 m	AL9STSC01I		AL9SCSC01I		AL9LCSC01I	
	2 m	AL9STSC02I		AL9SCSC02I		AL9LCSC02I	
	3 m	AL9STSC03I		AL9SCSC03I		AL9LCSC03I	
	5 m	AL9STSC05I		AL9SCSC05I		AL9LCSC05I	
	7 m	AL9STSC07I		AL9SCSC07I		AL9LCSC07I	
	10 m	AL9STSC10I		AL9SCSC10I		AL9LCSC10I	
LC	1 m	AL9LCST01I		AL9LCSC01I		AL9LCLC01I	
	2 m	AL9LCST02I		AL9LCSC02I		AL9LCLC02I	
	3 m	AL9LCST03I		AL9LCSC03I		AL9LCLC03I	
	5 m	AL9LCST05I		AL9LCSC05I		AL9LCLC05I	
	7 m	AL9LCST07I		AL9LCSC07I		AL9LCLC07I	
	10 m	AL9LCST10I		AL9LCSC10I		AL9LCLC10I	

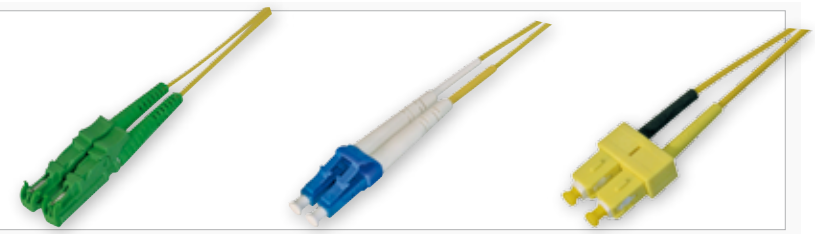


Data rates of over 10 Gbps in singlemode fiber are now common. Telephone companies are one of the primary users take advantage of this technology in order to accommodate their long-distance traffic.

SINGLEMODE DUPLEX E2000

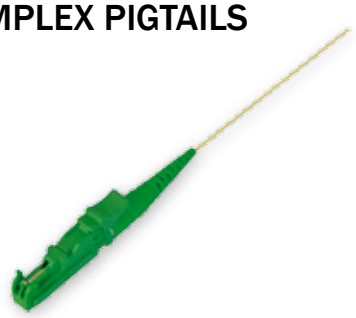
Connector with ceramic ferrule
Singlemode 09/125µ,
with 8° APC, Duplex
Single packed, with test report

LSOH



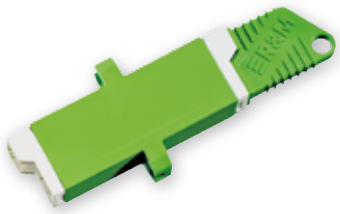
	length	E2000 8° APC reference		LC 8° APC reference		SC 8° APC reference	
E2000 8° APC	1 m	AL9E200001I		AL9E2000LC01I		AL9E2000SC01I	
	2 m	AL9E200002I		AL9E2000LC02I		AL9E2000SC02I	
	3 m	AL9E200003I		AL9E2000LC03I		AL9E2000SC03I	
	5 m	AL9E200005I		AL9E2000LC05		AL9E2000SC05I	

SIMPLEX PIGTAILS



- Singlemode with 8° APC
- Single packed with test report

description	length	reference	
E2000 singelmode	2 m	AL9FPE200002I	



- Singlemode with 8° APC
- Zirconia sleeve

description	length	reference	
E2000 coupling	2 m	ALWLE2000	

- Simplex OM2 50/125µ
- Semi tight buffer
- Colored buffer, according to IEC 302 (white, violet, turquoise, black, red, pink, orange, grey, green, yellow, brown, blue)
- 12 pcs in package

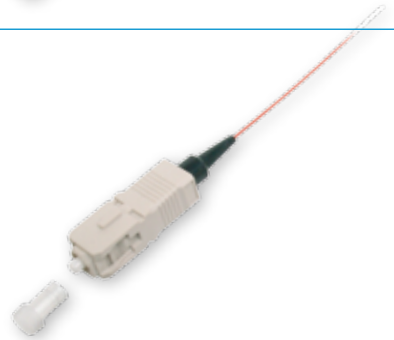
description	length	reference	
ST	2 m	AL5FPST02ISET	
SC		AL5FPSC02ISET	
LC		AL5FPLC02ISET	

ST Fiber Pigtail, Simplex

Tight buffer

Single pack with test report

MULTIMODE	description	length	reference	
	OM2 - 50/125µ	2 m	AL5FPST02I	
	OM1 - 62.5/125µ		AL6FPST02I	
	OM3 - 50/125µ		AL5FPST02/3I	
SINGLEMODE	**description**	**length**	**reference**	
	09/125µ	2 m	AL9FPST02I	



SC Fiber Pigtail, Simplex

Tight buffer

Single pack with test report

MULTIMODE	description	length	reference	
	OM2 - 50/125µ	2 m	AL5FPSC02I	
	OM1 - 62.5/125µ		AL6FPSC02I	
	OM3 - 50/125µ		AL5FPSC02/3I	
SINGLEMODE	**description**	**length**	**reference**	
	09/125µ	2 m	AL9FPSC02I	

LC Fiber Pigtail, Simplex

Tight buffer

Single pack with test report

MULTIMODE	description	length	reference	
	OM2 - 50/125µ	2 m	AL5FPLC02I	
	OM1 - 62.5/125µ		AL6FPLC02I	
	OM3 - 50/125µ		AL5FPLC02/3I	
SINGLEMODE	**description**	**length**	**reference**	
	09/125µ	2 m	AL9FPLC02I	

CONNECTORS / COUPLING

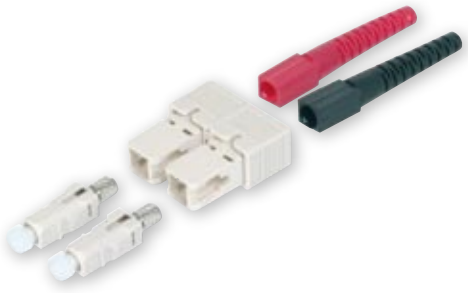
ST Simplex Connector male,
crimping sleeve and tension relief

ALWLST : phosphor bronze sleeve, black boot
ALWLST9: zirconia sleeve, yellow boot

description	reference
multimode	ALWLST
singlemode	ALWLST9

ST Duplex Connector Male,
crimping sleeve and tension relief

ALWLSCD : phosphor bronze sleeve, black boot
ALWLSCD9: zirconia sleeve, yellow boot



description	reference
multimode	ALWLSCD
singlemode	ALWLSCD9

LC Duplex Connector

ALWLLCD LC connector Multimode Duplex
with kink Protection

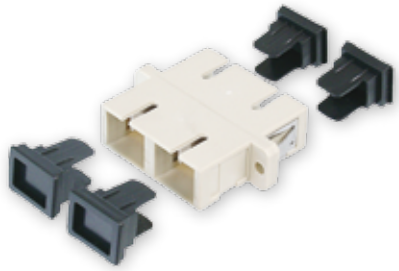
description	reference
multimode	ALWLLCD

ST/ST Simplex Coupling

ALWLSTK2: phosphor bronze sleeve
ALWLSTK1: zirconia sleeve

description	reference
multimode	ALWLSTK2
singlemode	ALWLSTK1

SC/SC Duplex Coupling



ALWLSCK1D : phosphor bronze sleeve
ALWLSCK2D: zirconia sleeve

description	reference
multimode	ALWLSCK1D
singlemode	ALWLSCK2D

ST/SC Duplex Coupling

ALWLSTSC1D : phosphor bronze sleeve
ALWLSTSC2DP: zirconia sleeve

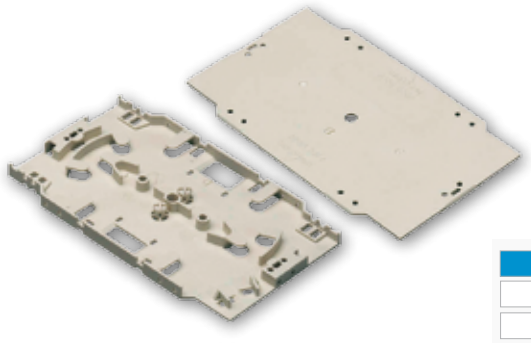
description	reference
multimode	ALWLSTSC1D
singlemode	ALWLSTSC2DP

LC/LC Duplex Coupling

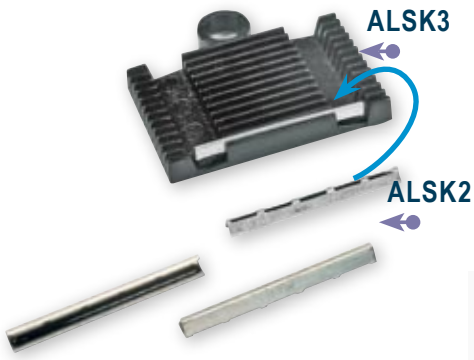
ALWLLC1D : phosphor bronze sleeve
ALWLLC2D : Zirconia sleeve

description	reference
multimode	ALWLLC1D
singlemode	ALWLLC2D

SPLICE ACCESSORIES



description	reference
splice cassette for 12 fibers	ALSK1
cap for splice cassette	ALSK4

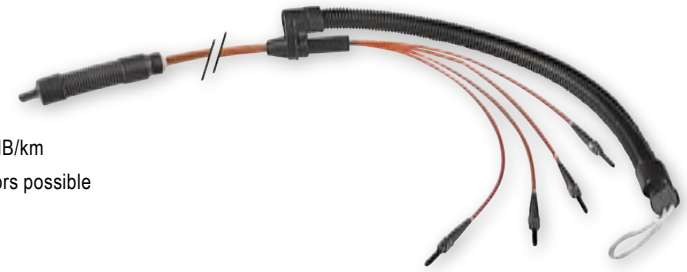


description	reference
crimp splice comb for 12 fibers	ALSK3
crimp splice protection,(set 15 pcs)	ALSK2

ST FIBER OPTIC CABLE SYSTEM WITH FEEDING ASSISTANCE

Breakout cable

- ST to ST connectors, breakout cable, halogen-free , I-V(ZN)H-H
- Primary coated fibers in compact hollow core
- Kevlar coating for strain relief, two halogen-free outer sheathings
- Tensile force 300N, attenuation values for 50 and 62.5 µm at 1300 nm: max. 1.3 dB/km
- All other standard connectors and lengths available, assembly of 2 to 96 connectors possible



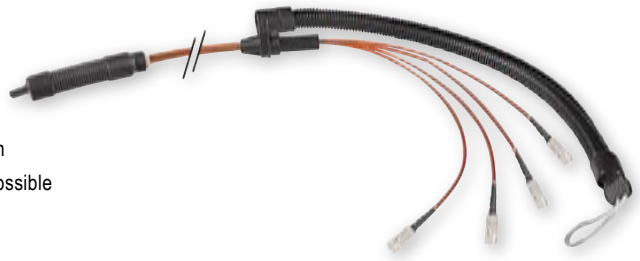
LSOH

description	type	length	4 ST ⇔ 4 ST reference	8 ST ⇔ 8 ST reference	12 ST ⇔ 12 ST reference
ST fiber optic cable breakout cable	50/125 µ	1 m	AL5BST4-01	AL5BST8-01	AL5BST12-01
	62.5/125 µ		AL6BST4-01	AL6BST8-01	AL6BST12-01

SC FIBER OPTIC CABLE SYSTEM WITH FEEDING ASSISTANCE

Breakout cable

- SC to SC connectors, breakout cable, halogen-free , I-V(ZN)H-H
- Primary coated fibers in compact hollow core
- Kevlar coating for strain relief, two halogen-free outer sheathings
- Tensile force 300N, attenuation values for 50 and 62.5 µm at 1300 nm: max. 1.3 dB/km
- All other standard connectors and lengths available, assembly of 2 to 96 connectors possible



LSOH

description	type	length	4 SC ⇔ 4 SC reference	8 SC ⇔ 8 SC reference	12 SC ⇔ 12 SC reference
SC fiber optic cable breakout cable	50/125 µ	1 m	AL5BSC4-01	AL5BSC8-01	AL5BSC12-01
	62.5/125 µ		AL6BSC4-01	AL6BSC8-01	AL6BSC12-01

19" FIBER SPLICE BOX - UNEQUIPPED

UNEQUIPPED
FIBER SPLICE BOX !

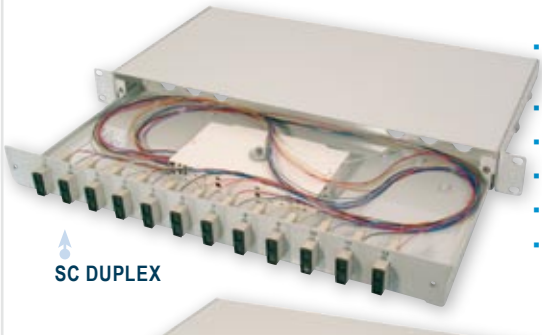
- Carrier housing 1.5 mm sheet steel
- Grey color RAL 7035
- 483 (W) x 350 (D) x 210 (pull out Depth) mm adjustable depth
- Holder for Splice box
- Punched out ground to fix Pigtails
- 4 PG entries and 2 cable entries
- PG 16 screws and mounting material in scope of delivery

AL19AZ12SCD
AL19AZ12SC

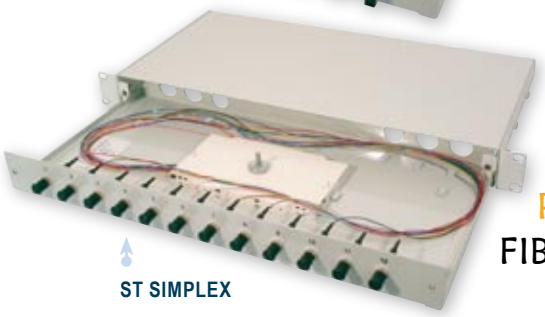
AL19AZ24ST

description	type	connectors	reference
unequipped 19" splice box - 1U	ST Simplex	12 x ST	AL19AZ12ST
		24 x ST	AL19AZ24ST
	SC Duplex	12 x SC	AL19AZ12SCD
		24 x SC	AL19AZ24SCD
	LC Duplex , SC & E2000 Simplex	12 x	AL19AZ12SC
		24 x	AL19AZ24SC

19" PREFABRICATED FIBER OPTIC BOX



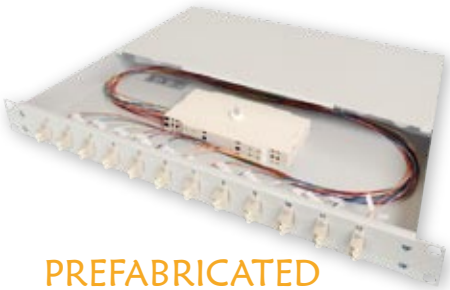
- Completely prefabricated, fiber pigtails removed and inserted into the splice cassette(s)
- Coloured pigtails
- Phosphor bronze sleeve
- Carrier housing of 1.5 mm sheet
- 483 (W) x 220 (D), extension depth 210 mm, adjustable depth
- PG 16 screws, cassette and cassette cover, crimp splice protection and cable clips included



PREFABRICATED
FIBER SPLICE BOX !

description	type		connectors	reference
prefabricated 19" fiber optic splice box - 1U	ST Simplex	multimode 50/125	12 x ST	AL19AZ12STK
			24 x ST	AL19AZ24STK
		singlemode 9/125	12 x ST	AL19AZ12STK9
			24 x ST	AL19AZ24STK9
	SC Duplex	multimode 50/125	12 x SC	AL19AZ12SCDK
			24 x SC	AL19AZ24SCDK
		singlemode 9/125	12 x SC	AL19AZ12SCDK9
			24 x SC	AL19AZ24SCDK9

LC DUPLEX MULTIMODE - 19" FIBER OPTIC SPLICE BOX



PREFABRICATED
FIBER SPLICE BOX !

- Completely prefabricated, fiber pigtails removed and inserted into the splice cassette(s)
- Phosphor bronze sleeve, polymer housing
- Carrier housing of 1.5 mm steel sheet
- 483 (W) x 220 (D), extension depth 210 mm, adjsutable depth
- PG 16 screws, cassette and cassette cover, crimp splice protection and cable clips included

connectors		connector	reference
LC duplex multimode prefabricated splice box	50/125	12 x LC	AL19AZ12LCDK
		24 x LC	AL19AZ24LCDK
LC duplex singlemode prefabricated splice box	9/125	12 x LC	AL19AZ12LCDK9
		24 x LC	AL19AZ24LCDK9

E2000 PREFABRICATED SINGLEMODE - 19" FIBER OPTIC SPLICE BOX

- Completely prefabricated, fiber pigtails removed and inserted into the splice cassette(s)
- Pigtails with 8° APC polish
- Adapter in polymer housing
- Carrier housing of 1.2 mm steel sheet
- 483 (W) x 220 (D), extension depth 210 mm, adjustable depth
- PG 16 screws, cassette and cassette cover, crimp splice protection and cable clips included

connectors		reference
E2000 singlemode 09/125µ - simplex	12 x E2000 simplex	AL19AZ12E2000K
	24 x E2000 simplex	AL19AZ24E2000K9